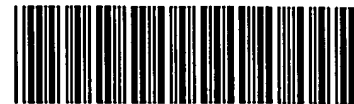


RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number: 10/024,632A
Source: 1FW/b
Date Processed by STIC: 10/2/06

ENTERED



IFW16

RAW SEQUENCE LISTING

DATE: 10/02/2006

PATENT APPLICATION: US/10/024,632A

TIME: 14:03:10

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Output Set: N:\CRF4\10022006\J024632A.raw

3 <110> APPLICANT: HE, STEVE S.
 4 DOTSON, STANTON B.
 6 <120> TITLE OF INVENTION: NUCLEIC ACID MOLECULES ASSOCIATED WITH PLANT CELL
 7 PROLIFERATION AND GROWTH AND USES THEREOF
 9 <130> FILE REFERENCE: 16517.327
 11 <140> CURRENT APPLICATION NUMBER: 10/024,632A
 12 <141> CURRENT FILING DATE: 2001-12-19
 14 <150> PRIOR APPLICATION NUMBER: 60/257,896
 15 <151> PRIOR FILING DATE: 2000-12-21
 17 <160> NUMBER OF SEQ ID NOS: 42
 19 <170> SOFTWARE: PatentIn Ver. 3.3
 21 <210> SEQ ID NO: 1
 22 <211> LENGTH: 2344
 23 <212> TYPE: DNA
 24 <213> ORGANISM: Glycine max
 26 <220> FEATURE:
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 35 gcagagatta acatgatgat tagtttattt gccaaagcaat gccttccttc gtgagatata 180
 37 aactgctagc aatttcaa atctttcgagt aaccaaag aaaaaaaca aaagcaagaa 240
 39 g atg aag cgc ata aat gag agt aac aac acc gat gat gga aac aat cat 289
 40 Met Lys Arg Ile Asn Glu Ser Asn Asn Thr Asp Asp Gly Asn Asn His
 41 1 5 10 15
 43 aac tgg ttg ggg ttc tct ctc tca ccc cac atg aaa atg gag gct act 337
 44 Asn Trp Leu Gly Phe Ser Leu Ser Pro His Met Lys Met Glu Ala Thr
 45 20 25 30
 47 tca gca gcc act gtt ccg aca acc ttc tac atg tcc cct tct caa tct 385
 48 Ser Ala Ala Thr Val Pro Thr Thr Phe Tyr Met Ser Pro Ser Gln Ser
 49 35 40 45
 51 cac ttg tcc aac ttc gga atg tgt tac ggt gtc gga gaa aat ggt aac 433
 52 His Leu Ser Asn Phe Gly Met Cys Tyr Gly Val Gly Glu Asn Gly Asn
 53 50 55 60
 55 ttc cat tct cca ctt acg gtt atg cct ctc aag tct gat ggg tca ctt 481
 56 Phe His Ser Pro Leu Thr Val Met Pro Leu Lys Ser Asp Gly Ser Leu
 57 65 70 75 80
 59 tgt atc ttg gaa gct ctc aaa aga tca caa acg caa gtg atg gtg cca 529
 60 Cys Ile Leu Glu Ala Leu Lys Arg Ser Gln Thr Gln Val Met Val Pro
 61 85 90 95
 63 act tcg tct ccg aaa ttg gag gac ttt cta ggt ggt gca act atg gga 577
 64 Thr Ser Ser Pro Lys Leu Glu Asp Phe Leu Gly Gly Ala Thr Met Gly

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DATE: 10/02/2006

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Output Set: N:\CRF4\10022006\J024632A.raw

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68 Thr His Glu Tyr Gly Ser His Glu Arg Gly Leu Ser Leu Asp Ser Ile
69          115          120          125
71 tat tat aac tcc caa aac gca gag gct caa ccc aac aga gac ctt ctt 673
72 Tyr Tyr Asn Ser Gln Asn Ala Glu Ala Gln Pro Asn Arg Asp Leu Leu
73          130          135          140
75 tca caa ccc ttc agg caa caa ggt cat atg agt gtc caa aca cac cct 721
76 Ser Gln Pro Phe Arg Gln Gln Gly His Met Ser Val Gln Thr His Pro
77 145          150          155          160
79 tat tac tca ggc ctt gct tgc cat ggt tta tat caa gca ccg ttg gag 769
80 Tyr Tyr Ser Gly Leu Ala Cys His Gly Leu Tyr Gln Ala Pro Leu Glu
81          165          170          175
83 gaa gaa aca aca aag gaa acg cac gtg tcg gat tgc agc tcc cta atg 817
84 Glu Glu Thr Thr Lys Glu Thr His Val Ser Asp Cys Ser Ser Leu Met
85          180          185          190
87 cct caa atg aca gaa ggc ttg aaa aac tgg gtg gct cca aca agg gag 865
88 Pro Gln Met Thr Glu Gly Leu Lys Asn Trp Val Ala Pro Thr Arg Glu
89          195          200          205
91 ttt tca act cac cag cag gtt ttg gag cag caa atg aat tgt ggc atg 913
92 Phe Ser Thr His Gln Gln Val Leu Glu Gln Gln Met Asn Cys Gly Met
93          210          215          220
95 ggg aat gag aga aat ggt gtg tct tta gga tct gtg ggg tgt gga gag 961
96 Gly Asn Glu Arg Asn Gly Val Ser Leu Gly Ser Val Gly Cys Gly Glu
97 225          230          235          240
99 tta cag tct cta agc tta tct atg agt cct ggt tct cag tct agt tgt 1009
100 Leu Gln Ser Leu Ser Leu Ser Met Ser Pro Gly Ser Gln Ser Ser Cys
101          245          250          255
103 gtc act gct cct tct gga aca gat tct gtt gct gtg gat gca aag aag 1057
104 Val Thr Ala Pro Ser Gly Thr Asp Ser Val Ala Val Asp Ala Lys Lys
105          260          265          270
107 aga ggg cat gct aaa ctt ggt cag aag cag cct gtg cat aga aaa tct 1105
108 Arg Gly His Ala Lys Leu Gly Gln Lys Gln Pro Val His Arg Lys Ser
109          275          280          285
111 atc gac aca ttt ggg caa aga acc tcg cag tat aga ggt gtc aca agg 1153
112 Ile Asp Thr Phe Gly Gln Arg Thr Ser Gln Tyr Arg Gly Val Thr Arg
113          290          295          300
115 cat aga tgg act ggt agg tat gaa gcg cat ttg tgg gat aat agt tgc 1201
116 His Arg Trp Thr Gly Arg Tyr Glu Ala His Leu Trp Asp Asn Ser Cys
117 305          310          315          320
119 aag aag gaa ggg caa act agg aaa gga cga caa gtg tat ttg ggg ggt 1249
120 Lys Lys Glu Gly Gln Thr Arg Lys Gly Arg Gln Val Tyr Leu Gly Gly
121          325          330          335
123 tat gat atg gag gag aaa gct gca aga gcc tat gat ctc gcg gcc ctt 1297
124 Tyr Asp Met Glu Glu Lys Ala Ala Arg Ala Tyr Asp Leu Ala Ala Leu
125          340          345          350
127 aag tac tgg gga cct tca acg cat ata aac ttt tcg ata gag aat tac 1345
128 Lys Tyr Trp Gly Pro Ser Thr His Ile Asn Phe Ser Ile Glu Asn Tyr
129          355          360          365

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133		370					375					380					
135	gca	cac	ttg	aga	aga	aaa	agc	agc	ggg	ttt	tct	aga	ggt	gct	tca	ata	1441
136	Ala	His	Leu	Arg	Arg	Lys	Ser	Ser	Gly	Phe	Ser	Arg	Gly	Ala	Ser	Ile	
137	385					390					395					400	
139	tac	aga	ggg	gtc	aca	agg	cat	cac	caa	cat	gga	aga	tgg	caa	gcg	agg	1489
140	Tyr	Arg	Gly	Val	Thr	Arg	His	His	Gln	His	Gly	Arg	Trp	Gln	Ala	Arg	
141					405					410						415	
143	ata	ggc	aga	gtt	gct	ggg	aac	aaa	gac	ctt	tac	ctt	ggg	acg	ttc	agc	1537
144	Ile	Gly	Arg	Val	Ala	Gly	Asn	Lys	Asp	Leu	Tyr	Leu	Gly	Thr	Phe	Ser	
145				420					425						430		
147	acc	caa	gag	gaa	gca	gca	gaa	gca	tac	gat	gta	gcg	gcg	atc	aaa	ttt	1585
148	Thr	Gln	Glu	Glu	Ala	Ala	Glu	Ala	Tyr	Asp	Val	Ala	Ala	Ile	Lys	Phe	
149			435					440									
151	cgc	ggc	gca	aat	gca	gtc	aca	aac	ttt	gac	att	tca	aga	tac	gat	gtg	1633
152	Arg	Gly	Ala	Asn	Ala	Val	Thr	Asn	Phe	Asp	Ile	Ser	Arg	Tyr	Asp	Val	
153		450					455					460					
155	gag	aga	atc	atg	gcc	agt	agc	aat	ctc	ctc	gct	ggg	gag	ctt	gca	agg	1681
156	Glu	Arg	Ile	Met	Ala	Ser	Ser	Asn	Leu	Leu	Ala	Gly	Glu	Leu	Ala	Arg	
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159	cgt	aag	aaa	gat	aac	gat	cct	aga	aac	aag	gac	ata	gac	tac	aac	aag	1729
160	Arg	Lys	Lys	Asp	Asn	Asp	Pro	Arg	Asn	Lys	Asp	Ile	Asp	Tyr	Asn	Lys	
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163	agt	gta	gta	aca	agt	gtg	aac	aat	gag	gaa	acg	gtt	caa	gtt	caa	gca	1777
164	Ser	Val	Val	Thr	Ser	Val	Asn	Asn	Glu	Glu	Thr	Val	Gln	Val	Gln	Ala	
165				500						505						510	
167	gga	aac	aac	aat	aat	gaa	aac	gac	tca	gag	tgg	aag	atg	gtt	tta	ttt	1825
168	Gly	Asn	Asn	Asn	Asn	Glu	Asn	Asp	Ser	Glu	Trp	Lys	Met	Val	Leu	Phe	
169			515					520								525	
171	aac	cac	cct	tca	cag	cag	caa	cag	gca	aat	ggc	aat	ggc	agt	gac	caa	1873
172	Asn	His	Pro	Ser	Gln	Gln	Gln	Gln	Ala	Asn	Gly	Asn	Gly	Ser	Asp	Gln	
173		530					535									540	
175	aaa	ata	atg	aac	tgt	gga	aat	tac	aga	aac	agt	gca	ttt	tct	atg	gcc	1921
176	Lys	Ile	Met	Asn	Cys	Gly	Asn	Tyr	Arg	Asn	Ser	Ala	Phe	Ser	Met	Ala	
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179	cta	caa	gat	ctt	att	ggg	att	gat	tcg	gtg	ggt	tct	ggg	cag	cat	aat	1969
180	Leu	Gln	Asp	Leu	Ile	Gly	Ile	Asp	Ser	Val	Gly	Ser	Gly	Gln	His	Asn	
181					565					570						575	
183	atg	ctg	gac	gag	tct	agc	aaa	att	ggg	act	cat	ttt	tca	aac	acg	tca	2017
184	Met	Leu	Asp	Glu	Ser	Ser	Lys	Ile	Gly	Thr	His	Phe	Ser	Asn	Thr	Ser	
185				580						585						590	
187	tcg	ctg	gtg	aca	agt	tta	agc	agc	tca	aga	gag	gct	agt	cct	gag	aaa	2065
188	Ser	Leu	Val	Thr	Ser	Leu	Ser	Ser	Ser	Arg	Glu	Ala	Ser	Pro	Glu	Lys	
189			595					600								605	
191	agg	ggt	ccc	tcg	ctt	ctg	ttc	cca	atg	cct	cca	atg	gaa	aca	aag	att	2113
192	Arg	Gly	Pro	Ser	Leu	Leu	Phe	Pro	Met	Pro	Pro	Pro	Met	Glu	Thr	Lys	
193		610					615									620	
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RAW SEQUENCE LISTING

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PATENT APPLICATION: US/10/024,632A

TIME: 14:03:10

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200 Val Gln Met Arg Pro Ser Pro Ala Ile Ser Leu Ser His Leu Pro Val
201                               645                               650                               655
203 ttt gct tct tgg act gat act taa atggagatag gcacggtcca tttttcatgt 2263
204 Phe Ala Ser Trp Thr Asp Thr
205                               660
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222 20 25 30
224 Ser Ala Ala Thr Val Pro Thr Thr Phe Tyr Met Ser Pro Ser Gln Ser
225 35 40 45
227 His Leu Ser Asn Phe Gly Met Cys Tyr Gly Val Gly Glu Asn Gly Asn
228 50 55 60
230 Phe His Ser Pro Leu Thr Val Met Pro Leu Lys Ser Asp Gly Ser Leu
231 65 70 75 80
233 Cys Ile Leu Glu Ala Leu Lys Arg Ser Gln Thr Gln Val Met Val Pro
234 85 90 95
236 Thr Ser Ser Pro Lys Leu Glu Asp Phe Leu Gly Gly Ala Thr Met Gly
237 100 105 110
239 Thr His Glu Tyr Gly Ser His Glu Arg Gly Leu Ser Leu Asp Ser Ile
240 115 120 125
242 Tyr Tyr Asn Ser Gln Asn Ala Glu Ala Gln Pro Asn Arg Asp Leu Leu
243 130 135 140
245 Ser Gln Pro Phe Arg Gln Gln Gly His Met Ser Val Gln Thr His Pro
246 145 150 155 160
248 Tyr Tyr Ser Gly Leu Ala Cys His Gly Leu Tyr Gln Ala Pro Leu Glu
249 165 170 175
251 Glu Glu Thr Thr Lys Glu Thr His Val Ser Asp Cys Ser Ser Leu Met
252 180 185 190
254 Pro Gln Met Thr Glu Gly Leu Lys Asn Trp Val Ala Pro Thr Arg Glu
255 195 200 205
257 Phe Ser Thr His Gln Gln Val Leu Glu Gln Gln Met Asn Cys Gly Met
258 210 215 220
260 Gly Asn Glu Arg Asn Gly Val Ser Leu Gly Ser Val Gly Cys Gly Glu
261 225 230 235 240
263 Leu Gln Ser Leu Ser Leu Ser Met Ser Pro Gly Ser Gln Ser Ser Cys
264 245 250 255
266 Val Thr Ala Pro Ser Gly Thr Asp Ser Val Ala Val Asp Ala Lys Lys
267 260 265 270

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RAW SEQUENCE LISTING

DATE: 10/02/2006

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TIME: 14:03:10

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269 Arg Gly His Ala Lys Leu Gly Gln Lys Gln Pro Val His Arg Lys Ser
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273      290      295      300
275 His Arg Trp Thr Gly Arg Tyr Glu Ala His Leu Trp Asp Asn Ser Cys
276 305      310      315      320
278 Lys Lys Glu Gly Gln Thr Arg Lys Gly Arg Gln Val Tyr Leu Gly Gly
279      325      330      335
281 Tyr Asp Met Glu Glu Lys Ala Ala Arg Ala Tyr Asp Leu Ala Ala Leu
282      340      345      350
284 Lys Tyr Trp Gly Pro Ser Thr His Ile Asn Phe Ser Ile Glu Asn Tyr
285      355      360      365
287 Gln Val Gln Leu Glu Glu Met Lys Asn Met Ser Arg Gln Glu Tyr Val
288      370      375      380
290 Ala His Leu Arg Arg Lys Ser Ser Gly Phe Ser Arg Gly Ala Ser Ile
291 385      390      395      400
293 Tyr Arg Gly Val Thr Arg His His Gln His Gly Arg Trp Gln Ala Arg
294      405      410      415
296 Ile Gly Arg Val Ala Gly Asn Lys Asp Leu Tyr Leu Gly Thr Phe Ser
297      420      425      430
299 Thr Gln Glu Glu Ala Ala Glu Ala Tyr Asp Val Ala Ala Ile Lys Phe
300      435      440      445
302 Arg Gly Ala Asn Ala Val Thr Asn Phe Asp Ile Ser Arg Tyr Asp Val
303      450      455      460
305 Glu Arg Ile Met Ala Ser Ser Asn Leu Leu Ala Gly Glu Leu Ala Arg
306 465      470      475      480
308 Arg Lys Lys Asp Asn Asp Pro Arg Asn Lys Asp Ile Asp Tyr Asn Lys
309      485      490      495
311 Ser Val Val Thr Ser Val Asn Asn Glu Glu Thr Val Gln Val Gln Ala
312      500      505      510
314 Gly Asn Asn Asn Asn Glu Asn Asp Ser Glu Trp Lys Met Val Leu Phe
315      515      520      525
317 Asn His Pro Ser Gln Gln Gln Gln Ala Asn Gly Asn Gly Ser Asp Gln
318      530      535      540
320 Lys Ile Met Asn Cys Gly Asn Tyr Arg Asn Ser Ala Phe Ser Met Ala
321 545      550      555      560
323 Leu Gln Asp Leu Ile Gly Ile Asp Ser Val Gly Ser Gly Gln His Asn
324      565      570      575
326 Met Leu Asp Glu Ser Ser Lys Ile Gly Thr His Phe Ser Asn Thr Ser
327      580      585      590
329 Ser Leu Val Thr Ser Leu Ser Ser Ser Arg Glu Ala Ser Pro Glu Lys
330      595      600      605
332 Arg Gly Pro Ser Leu Leu Phe Pro Met Pro Pro Met Glu Thr Lys Ile
333      610      615      620
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336 625      630      635      640
338 Val Gln Met Arg Pro Ser Pro Ala Ile Ser Leu Ser His Leu Pro Val
339      645      650      655
341 Phe Ala Ser Trp Thr Asp Thr

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/024,632A

DATE: 10/02/2006
TIME: 14:03:11


Input Set : A:\16517327.APP
Output Set: N:\CRF4\10022006\J024632A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:25; Xaa Pos. 1
Seq#:26; Xaa Pos. 1
Seq#:28; Xaa Pos. 4,7
Seq#:29; Xaa Pos. 4,7
Seq#:30; Xaa Pos. 4,7
Seq#:31; Xaa Pos. 3

VERIFICATION SUMMARY

DATE: 10/02/2006

PATENT APPLICATION: US/10/024,632A

TIME: 14:03:11

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Output Set: N:\CRF4\10022006\J024632A.raw

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L:1827 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0
L:1865 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0
L:1889 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0
L:1913 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0
L:1932 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0